

REMARKS

Claims 1-3 and 5-14 remain pending in the application. Applicant amends claims 1, 5, 10, 11, and 12 herein. Support for these amendments can be found throughout the specification, claims, and drawings as originally filed and in particular at page 19, lines 22-25 and in claim 4. No new matter is added. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 101

Claims 10-12 stand rejected under 35 U.S.C. § 101 as being drawn to a method without containing process steps. This rejection is respectfully traversed. Notwithstanding, Applicant amends claims 10-12 to incorporate process steps. Accordingly, Applicant respectfully requests reconsideration and withdrawal of these rejections.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-3 and 8-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by US 2002/0101552 to Yi, et al. (Yi). This rejection is respectfully traversed.

The office action alleges that Yi discloses a color filter substrate for a liquid crystal display comprising a substrate having a transmissive portion and a reflective portion, the transmissive portion having a groove, a black matrix on the substrate; and a color filter layer on the black matrix and the substrate. The office action further alleges

that the etching depth of the groove is determined considering the thickness ratio of the color filter layer between the transmissive and reflective portions.

Although Applicant does not agree with the rejection, Applicant amends independent claim 1. Amended claim 1 calls for a color filter comprising a substrate having a plurality of areas and each area having a colored portion thereon. The plurality of areas each have a light reflecting area in which light entering the colored portion is reflected, and a light transmitting area through which light entering the colored portion passes. The light transmitting area includes a recessed portion for adjusting an optical path length in the colored portion. Importantly, the plurality of areas are partitioned by banks formed on the substrate.

Applicant also amends independent claim 10. Amended claim 10 calls for a method for producing a color filter comprising a substrate having a plurality of areas, and each area having a colored portion thereon. The plurality of areas each have a light reflecting area in which light entering the colored portion is reflected, and a light transmitting area through which light entering the colored portion passes. The method comprises the steps of forming a reflection layer on the substrate; forming recessed portions in the light transmitting area on the substrate; and forming banks on the reflection layer which partition said plurality of areas.

Thus, claim 1 calls for banks formed on the substrate and partitioning the plurality of areas. Similarly, claim 10 calls for forming banks on the reflection layer that partition the plurality of areas. The claimed banks eliminate the possibility of color mixture caused by colored light being emitted into adjacent areas and mixing with other light

emitted therefrom. Therefore, the color filter of the claimed invention can improve visibility by eliminating color mixture.

As noted above, the Office Action states that Yi discloses a color filter including “a color filter substrate having a transmissive portion having a groove; a black matrix on the substrate; and a color filter layer on the black matrix and the substrate” and refers to FIGS. 6A to 6C. However, the color filter disclosed in Yi does not include the claimed banks which are effective for eliminating the possibility of color mixture. The unique features of claims 1 and 10 result in benefits (i.e., improvements on visibility) not found in Yi.

As can be appreciated from the foregoing, Yi does not teach each and every aspect of claims 1 and 10 and therefore cannot anticipate claims 1 and 10. Claims 1 and 10 should be in condition for allowance. Claims 2, 3, and 5-9 depend from claim 1 and should be in condition for allowance for at least the same reasons as set forth above with respect to claim 1. Claims 11-14 depend from claim 10 and should be in condition for allowance for at least the same reasons as set forth above with respect to claim 10.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US 2002/0101552 to Yi et al. (Yi) in view of US 6,022,647 to Hirose et al. (Hirose). This rejection is respectfully traversed.

The office action states that Yi teaches forming the color filter layer by depositing and patterning a color resin, not by discharging droplets into areas partitioned by banks.

The office action then alleges that Hirose discloses a method of making a color filter substrate comprising the steps of forming barriers having ink-repellent characteristics on a substrate, placing ink onto regions between the barriers using an ink-jet apparatus, and curing the ink to form color lines.

As noted above, claim 1 calls for banks formed on the substrate and partitioning the plurality of areas. Similarly, claim 10 calls for forming banks on the reflection layer that partition the plurality of areas. The claimed banks eliminate the possibility of color mixture caused by colored light being emitted into adjacent areas and mixing with other light emitted therefrom. Therefore, the color filter of the present invention can improve visibility by eliminating color mixture.

Hirose fails to teach or suggest the claimed banks or a method including the claimed step of forming banks on the reflection layer. Accordingly, the combination of Yi and Hirose does not yield the claimed invention. As such, the combination of Yi and Hirose cannot render claims 1 and 10 unpatentable. Claims 1 and 10 recite unique features which result in benefits (i.e., improvements in visibility) not found in Yi, Hirose, or the combination thereof. Claims 1 and 10 should be in condition for allowance.

Claims 2, 3, and 5-9 depend from claim 1 and should be in condition for allowance for at least the same reasons as set forth above with respect to claim 1. Claims 11-14 depend from claim 10 and should be in condition for allowance for at least the same reasons as set forth above with respect to claim 10.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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